NOVEMBER/DECEMBER 2023

CBT31/FBT31 — MICROBIOLOGY

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL the following.

Very short answer questions.

1. Who first observed microorganisms? List some of his contributions to the field of microbiology.

2. List the characteristics of eubacteria.

3. Name the commonly used microscope in the laboratory. What is the function of the condenser in a brightfield microscope?

4. Define Slime.

5. What are chemolithotrophs? Give an example.

6. Explain about axenic culture.

7. What are acidophiles?

8. Define phenol coefficient test.

9. Name any two microbes which can be used as a source of protein.

10. What are the signs and symptoms of Athlete's foot?

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Compare the structure of prokaryotic and Eukaryotic cells.

Or

(b) Examine the characteristic features of archaebacteria.

12. (a) What is electron microscopy? Identify the applications of Transmission electron microscope.

Or

(b) Examine the different types of bacterial flagella with diagram.

13. (a) Discuss about the different nutrients that are required for the growth of bacteria.

Or

(b) Analyze the different phases of growth curve and explain about it.

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14. (a) Examine the various factors that control the growth of microbes.

Or

(b) Show how Kirby Bauer disk diffusion technique is used to test for antibiotic susceptibility.

15. (a) Criticize the rote of microbes in food spoilage.

Or

(b) Summarize the causative agent, signs, Symptoms and lab diagnosis of malaria.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Discuss in detail the five kingdom concept of classification.

17. Describe the ultrastructure of bacteria using E.Coli as model organism.

18. Explain the different methods employed in isolation of pure culture.

19. Elaborate the various chemical ways of sterilization.

20. Summarize the role of microbes as SCP with its advantages and disadvantages.

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